CLAIMS

What is claimed is:

1. A camera, comprising:
   a) a motor that is accelerated, in response to rotation of the camera, such that reaction torque induced by the acceleration acts to counter rotation of the camera; and
   b) a capacitor that stores energy for driving the motor.

2. The camera of claim 1 wherein an additional mass is attached to the rotor of the motor.

3. The camera of claim 1, further comprising an accelerometer that measures rotational movements of the camera.

4. The camera of claim 3 wherein the accelerometer is a rotational accelerometer.

5. The camera of claim 3 wherein an acceleration signal provided by the accelerometer is integrated to determine a rotational velocity of the camera.

6. The camera of claim 5 wherein the integration is performed by an integration circuit.

7. The camera of claim 5 wherein the integration is performed by logic executing a stored program.

8. The camera of claim 7 wherein the logic is a microprocessor.

9. The camera of claim 1 wherein the rotation of the camera is measured using a rate gyroscope.

10. The camera of claim 1 wherein the camera is a digital camera.

11. The camera of claim 10 wherein rotation of the camera is measured by analyzing successive digital images taken by the camera.

12. The camera of claim 1, further comprising a second motor that is accelerated such that reaction torque induced by the acceleration acts to counter rotation of the camera about an axis of rotation different from the axis of rotation about which rotation of the camera is countered by acceleration of the first motor.

13. The camera of claim 1 wherein the motor is accelerated for a duration computed before the acceleration based on a rotational velocity of the camera.

14. The camera of claim 1 wherein a rotational velocity of the camera is monitored, and the actuation of the motor is stopped when the rotational velocity becomes essentially zero.

15. The camera of claim 14 wherein the actuation of the motor is stopped by interrupting a flow of current from the capacitor.

16. The camera of claim 1 wherein the reaction torque reduces a rotational velocity of the camera momentarily essentially to zero, and the camera takes a photograph while the camera is relatively stable.

17. A camera, comprising a solenoid having a core, the core of the solenoid accelerated in response to rotation of the camera such that reaction torque induced by the acceleration acts to counter rotation of the camera.

18. The camera of claim 17, further comprising an accelerometer that measures rotational movements of the camera.

19. The camera of claim 18 wherein the accelerometer is a rotational accelerometer.

20. The camera of claim 18 wherein an acceleration signal provided by the accelerometer is integrated to determine a rotational velocity of the camera.

21. The camera of claim 20 wherein the integration is performed by an integration circuit.

22. The camera of claim 20 wherein the integration is performed by logic executing a stored program.

23. The camera of claim 22 wherein the logic is a microprocessor.

24. The camera of claim 17 wherein the camera is a digital camera.

25. The camera of claim 24 wherein rotation of the camera is measured by analyzing successive digital images taken by the camera.

26. The camera of claim 17, further comprising a second solenoid having a second core that is accelerated such that reaction torque induced by the acceleration acts to counter rotation of the camera about an axis of rotation different from the axis of rotation about which rotation of the camera is countered by acceleration of the first solenoid core.

27. The camera of claim 17 wherein the solenoid core is accelerated for a duration computed before the acceleration based on a rotational velocity of the camera.

28. The camera of claim 17 wherein a rotational velocity of the camera is monitored, and the actuation of the solenoid core is stopped when the rotational velocity becomes essentially zero.

29. The camera of claim 17, further comprising a capacitor that stores energy for the actuation of the solenoid core.

30. The camera of claim 29 wherein actuation of the solenoid core is stopped by interrupting a flow of current from the capacitor.

31. The camera of claim 17 wherein the reaction torque reduces a rotational velocity of the camera momentarily essentially to zero, and the camera takes a photograph while the camera is relatively stable.

32. The camera of claim 17, further comprising a second solenoid, the actuation of which counters camera rotation in the same axis as actuation of the first solenoid,, and wherein the second solenoid is placed on the opposite side of the camera center of mass from the first solenoid, and is actuated in the opposite direction as the first solenoid.

33. A method of stabilizing a camera, comprising the steps of:

a) measuring a rotational velocity of the camera;

b) storing energy in a capacitor; and

c) accelerating the rotor of a motor, using energy from the capacitor, in response to the rotational velocity of the camera, such that a reaction torque induced by the acceleration reduces the rotational velocity of the camera.

34. The method of claim 33, further comprising the step of accelerating a rotor of a second motor such that a reaction torque induced by the second acceleration reduces a rotational velocity of the camera in a degree of freedom different from that affected by the acceleration of the first motor rotor.

35. The method of claim 33 further comprising the step of taking a photograph while the rotational velocity is reduced.

36. The method of claim 33, further comprising the steps of:

a) monitoring the rotational velocity of the camera; and

b) stopping the actuation of the motor when the rotational velocity approaches zero.

37. The method of claim 33, further comprising the steps of:

a) computing a duration for the acceleration based on the rotational velocity of the camera; and

b) accelerating the rotor of the motor for the computed duration.

38. The method of claim 33, further comprising the steps of:

a) monitoring a rotational acceleration of the camera; and

b) integrating the rotational acceleration to obtain the rotational velocity of the camera.

39. The method of claim 38 wherein the step of integrating the rotational acceleration to obtain the rotational velocity of the camera is performed by logic executing a stored program.

40. The method of claim 33, further comprising the step of stopping the actuation of the motor by interrupting the flow of current from the capacitor.

41. The method of claim 33 wherein the step of measuring the rotational velocity of the camera is accomplished by analyzing successive digital images taken by the camera.

42. The method of claim 33 wherein the step of measuring the rotational velocity of the camera is accomplished using an accelerometer.

43. A method of stabilizing a camera, comprising the steps of:

a) measuring a rotational velocity of the camera; and

b) accelerating, in response to the rotational velocity of the camera, the core of a solenoid, such that reaction torque induced by the acceleration acts to reduce the rotational velocity of the camera.

44. The method of claim 43, further comprising the step of accelerating a core of a second solenoid such that a reaction torque induced by the second acceleration reduces a rotational velocity of the camera in a degree of freedom different from that affected by the acceleration of the first solenoid core.

45. The method of claim 43, further comprising the step of taking a photograph while the rotational velocity of the camera is reduced.

46. The method of claim 43, further comprising the steps of:

a) monitoring the rotational velocity of the camera; and

b) stopping the actuation of the solenoid core when the rotational velocity approaches zero.

47. The method of claim 43, further comprising the steps of:

a) computing a duration for the acceleration based on the rotational velocity of the camera; and

b) accelerating the core of the solenoid for the computed duration.

48. The method of claim 43, further comprising the steps of:

a) monitoring a rotational acceleration of the camera; and

b) integrating the rotational acceleration to obtain the rotational velocity of the camera.

49. The method of claim 48 wherein the step of integrating the rotational acceleration to obtain the rotational velocity of the camera is performed by logic executing a stored program.

50. The method of claim 43 wherein the step of measuring the rotational velocity of the camera is accomplished by analyzing successive digital images taken by the camera.

51. The method of claim 43 wherein the step of measuring the rotational velocity of the camera is accomplished using an accelerometer.

52. The method of claim 43, further comprising the step of storing energy in a capacitor for actuating the solenoid core.

53. The method of claim 52, further comprising the step of stopping the actuation of the solenoid core by interrupting a flow of current from the capacitor.

54. A camera, comprising:

a) means for measuring a rotational velocity of the camera; and

b) means for producing, by accelerating an inertial element using energy stored in a capacitor, in response to the rotational velocity of the camera, a torque that reduces the rotational velocity of the camera.

55. A camera, comprising:

a) a rate gyroscope that measures rotation of the camera; and

b) an inertial mass that is accelerated such that reaction torque induced by the acceleration acts to counter rotation of the camera.

56. A digital camera, comprising:

a) logic that measures rotation of the camera by analyzing successive digital images taken by the camera; and

b) an inertial mass that is accelerated such that reaction torque induced by the acceleration acts to counter the rotation of the camera.

57. A camera, comprising an inertial mass that, near the time of taking a photograph, is accelerated in response to rotation of the camera such that reaction torque induced by the acceleration acts to counter rotation of the camera when a speed of the rotation is below a predetermined value, and wherein the inertial mass is not accelerated when the speed of rotation exceeds the predetermined value.

58. A camera, comprising an inertial mass that, near the time of taking a photograph, is accelerated in response to rotation of the camera such that reaction torque induced by the acceleration acts to drive the rotation of the camera to an average speed measured over a predetermined preceding interval.